USSN: 10/534,075

Attorney Docket No. P2002J113

Reply to Final Office Action mailed February 20, 2009

Date: August 20, 2009

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in this application.

Listing of Claims:

1-38. (Cancelled)

39. (Previously Presented) A process for hydrogenating one or more organic compounds comprising:

(a) contacting one or more unsaturated organic compounds with a source of hydrogen in the presence of a catalyst comprising one or more catalytically active metal sites located on a catalyst support, under hydrogenation conditions, whereby at least one of said one or more unsaturated organic compounds are hydrogenated to provide a product;

(b) recovering said product;

wherein at least one of said catalytically active metal sites has been obtained via the partial decomposition on said catalyst support of a complex of a Transition Group VIII metal and a nitrogen-containing organic compound selected from (i) amino acids and (ii) compounds containing both an amino group and an alcohol hydroxyl group, partial decomposition having been carried out such that new vibration bands appear in the infra red spectrum of the complex at between 2100-2200 cm⁻¹ and (a) having been carried out in the presence of hydrogen or (b) being followed by treatment with hydrogen.

40. (Previously Presented) The process according to Claim 39, wherein said at least one or more unsaturated organic compounds include at least one benzenepolycarboxylic acid.

41. (Previously Presented) The process according to Claim 40, wherein said benzenepolycarboxylic acid is selected from the group consisting of phthalic acid, terephthalic acid, isophthalic acid, trimellitic acid, trimesic acid, hemimellitic acid and pyromellitic acid, and mixtures of two or more thereof.

42. (Currently Amended) The process according to Claim 40, wherein said benzenepolycarboxylic acid derivative is selected from the group consisting monoalkyl

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and dialkyl esters of phthalic acid, terephthalic acid and isophthalic acid, monoalkyl, dialkyl and trialkyl esters of trimellitic acid, trimesic acid and hemimellitic acid, monoalkyl, dialkyl, trialkyl and tetraalkyl esters of pyromellitic acid, where the alkyl groups can be linear or branched and each have from 3 to 18 carbon atoms, anhydrides of phthalic acid, trimellitic acid and hemimellitic acid, pyromellitic dianhydride, and mixtures of two or more thereof.

- 43. (Previously Presented) The process according to Claim 39, wherein said contacting in step (a) is carried out at a pressure of 25 to 300 bar.
- 44. (Previously Presented) The process according to Claim 39, wherein said contacting in step (a) is carried out at a pressure of 50 to 220 bar.
- 45. (Previously Presented) The process according to Claim 39, wherein the total metal dispersion of the hydrogenation catalyst is 45% or more and the metal dispersion relating to a strongly chemisorbed component of the total metal dispersion is 20% or greater
- 46. (Previously Presented) The process according to Claim 39, wherein said decomposition is undertaken under hydrogen.
- 47. (Previously Presented) The process according to Claim 39, wherein after decomposition the partially or fully decomposed organic complex is treated with a source of hydrogen.
- 48. (Previously Presented) The process according to Claim 39, wherein said decomposition is undertaken via calcination, and said calcination temperature is less than the temperature, as determined by TGA in air, at which total weight loss of the organic complex occurs.
- 49. (Previously Presented) The process according to Claim 48, wherein said calcination temperature is between 200 °C and the temperature at which total weight loss of the organic complex occurs.

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50. (Previously Presented) The process according to Claim 39, wherein said organic nitrogen-containing compound is one or more amino acids.

- 51. (Previously Presented) The process according to Claim 39, wherein wherein at least one of said support materials is one or more ordered mesoporous materials
- 52. (Previously Presented) The process according to Claim 51, wherein wherein at least one of said support materials are selected from the group consisting of MCM-41, MCM-48 and MCM-50.
- 53. (Previously Presented) The process according to Claim 39, wherein said Group VIII metal is selected from the group consisting of platinum, rhodium, palladium, cobalt, nickel or ruthenium and a mixture of two or more thereof.
- 54. (Previously Presented) A process for hydrogenating one or more benzenepolycarboxylic acids comprising:
- (a) contacting one or more benzenepolycarboxylic acids with a source of hydrogen in the presence of a catalyst comprising one or more catalytically active metal sites located on a catalyst support, under hydrogenation conditions, whereby said one or more benzenepolycarboxylic acids are hydrogenated to provide a product;
 - (b) recovering said product;

wherein at least one of said catalytically active metal sites has been obtained via the partial decomposition on said catalyst support of a complex of a Transition Group VIII metal and a nitrogen-containing organic compound selected from (i) amino acids and (ii) compounds containing both an amino group and an alcohol hydroxyl group, partial decomposition having been carried out such that new vibration bands appear in the infra red spectrum of the complex at between 2100-2200 cm⁻¹ and (a) having been carried out in the presence of hydrogen or (b) being followed by treatment with hydrogen;

wherein said Transition Group VIII metal is selected from the group consisting of platinum, rhodium, palladium, cobalt, nickel or ruthenium and a mixture of two or more thereof; and

wherein at least one of said support materials are selected from the group consisting of MCM-41, MCM-48 and MCM-50.